Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A nanoparticle, which ~~particle~~ encapsulates a fluorescent material, ~~characterised in that~~ wherein the nanoparticle comprises a fluorescent dye based on entrapment of a protein-dye conjugate or a DNA-dye conjugate within the nanoparticle.

Claim 2 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the nanoparticle is derived from a sol gel.

Claim 3 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the nanoparticle is intrinsically fluorescent.

Claim 4 (currently amended): A nanoparticle according to claim 3, ~~characterised in that~~ wherein the nanoparticle is derived from cadmium sulphide and cadmium selenide optionally doped with rare earth atoms.

Claim 5 (currently amended): A nanoparticle according to claim 4, ~~characterised in that~~ wherein the rare earth atom is europium III salt.

Claim 6 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the nanoparticle is substantially spherical and has a diameter of ~~from~~ 30 to 500 nm.

Claim 7 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the dye is selected from Texas Red-labelled gelatin, porcine thyroglobulin, and fluorescein-labelled bovine serum albumin or gelatin.

Claim 8 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the ~~surfaces~~ surface of the ~~particles~~ nanoparticle ~~are~~ is modified to enable ~~them~~ the nanoparticle to be provided with a surface coating.

Claim 9 (currently amended): A nanoparticle according to claim 8, ~~characterised in that~~ wherein the ~~particles~~ nanoparticle ~~are~~ is capable of being modified by passive adsorption or via covalent attachment to coat ~~their~~ its ~~surfaces~~ surface with hydrophobic molecules.

Claim 10 (currently amended): A nanoparticle according to claim 9, ~~characterised in that~~ wherein the hydrophobic molecules are selected from phosphatidylcholine and phosphatidylethanolamine.

Claim 11 (currently amended): A nanoparticle according to claim 2, ~~characterised in that~~ wherein the ~~Sol~~ sol gel-derived ~~nanoparticles~~ nanoparticle ~~comprise~~ comprises a Texas Red-porcine thyroglobulin conjugate embedded within ~~them~~ the nanoparticle.

Claim 12 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the ~~particles~~ particle ~~comprise~~ comprises a high fluorescence intensity nanoparticle.

Claim 13 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the surface coating is lipophilic.

Claim 14 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the particle is adapted to bind to a sebum-derived component.

Claim 15 (currently amended): A nanoparticle according to claim 14, ~~characterised in~~ ~~that~~ wherein the sebum-derived component is selected from the group comprising waxes, cholesterol and squalene.

Claim 16 (currently amended): A nanoparticle according to claim 13, ~~characterised in that~~ wherein the surface coating is selected from phosphatidylcholine and phosphatidylethanolamine.

Claim 17 (currently amended): A nanoparticle according to claim 8, ~~characterised in that~~ wherein the coating is passively adsorbed directly onto the sol gel particle.

Claim 18 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the ~~particles are~~ nanoparticle is formed from TEMOS (tetramethyloxysilane).

Claim 19 (currently amended): A nanoparticle according to claim 18, ~~characterised in that~~ wherein the ~~particles~~ nanoparticle ~~comprise~~ comprises an aminopropyloxysilane-derived sol ~~gels~~ gel.

Claim 20 (currently amended): A method of preparing the nanoparticle according to claim 19, ~~characterised in that~~ comprising ~~the preparation of the particles included a~~ preparing the nanoparticle by glutaraldehyde treatment.

Claim 21 (currently amended): ~~A~~ The method of preparing a nanoparticle according to claim 20, ~~characterised in that~~ further comprising reducing the nanoparticle by cyanoborohydride reduction following the glutaraldehyde treatment ~~was followed by cyanoborohydride reduction~~.

Claim 22 (currently amended): ~~A~~ The method of preparing a nanoparticle according to claim 21, ~~characterised in that~~ further comprising washing the nanoparticle with an ethanolamine wash following the cyanoborohydride reduction ~~was followed by an ethanolamine wash~~.

Claim 23 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the ~~particles~~ nanoparticle ~~are~~ is an uncoated ~~nanoparticles~~ nanoparticle and ~~carry~~ carries either a net negative or a net positive charge.

Claim 24 (currently amended): A nanoparticle according to claim 1, ~~characterised in that~~ wherein the ~~particles~~ nanoparticle ~~are~~ is provided with a hydrophilic coating.

Claim 25 (currently amended): A nanoparticle according to claim 24, ~~characterised in that~~ wherein the coating carries either a net negative or a net positive charge.

Claim 26 (currently amended): A nanoparticle according to claim 24, ~~characterised in that~~ wherein the hydrophilic coating comprises polylysine.

Claim 27 (currently amended): A method of detecting ~~prints~~ fingerprints ~~(e.g. fingerprints)~~ which comprises determining details of fingerprint substructures with the ~~use of a~~ nanoparticle according to claim 1.

Claim 28 (canceled).

Claim 29 (currently amended): ~~A~~ The method according to claim ~~1 characterised in that the scanning was performed~~ 27, wherein determining details of fingerprint substructures includes scanning the fingerprint substructures ~~performed~~ at an excitation wavelength ~~of 595 nm~~ that induces the fluorescent material to fluoresce.

Claim 30 (currently amended): ~~A nanoparticle or a~~ The method according to claim 29, wherein the scanning is at an excitation wavelength of 595 nm ~~substantially as described with reference to the accompanying examples.~~